EUREKA MATH™

GREAT MINDS

ABOUT *EUREKA MATH*

Created by the nonprofit Great Minds, *Eureka Math* helps teachers deliver unparalleled math instruction that provides students with a deep understanding and fluency in math. Crafted by teachers and math scholars, the curriculum carefully sequences the mathematical progressions to maximize coherence from Prekindergarten through Precalculus—a principle tested and proven to be essential in students' mastery of math.

Teachers and students using *Eureka Math* find the trademark "Aha!" moments in *Eureka Math* to be a source of joy and inspiration, lesson after lesson, year after year.

ALIGNED

Eureka Math is the only curriculum found by EdReports.org to align fully with the Common Core State Standards for Mathematics for all grades, Kindergarten through Grade 8. Great Minds offers detailed analyses which demonstrate how each grade of *Eureka Math* aligns with specific state standards. Access these free alignment studies at greatminds.org/state-studies.

DATA

Schools and districts nationwide are experiencing student growth and impressive test scores after using *Eureka Math*. See their stories and data at greatminds.org/data.

FULL SUITE OF RESOURCES

As a nonprofit, Great Minds offers the *Eureka Math* curriculum as PDF downloads for free, noncommercial use. Access the free PDFs at greatminds.org/math/curriculum.

The teacher–writers who created the curriculum have also developed essential resources, available only from Great Minds, including the following:

- Printed material in English and Spanish
- Digital resources
- Professional development
- Classroom tools and manipulatives
- Teacher support materials
- Parent resources

GRADE 3 MATHEMATICS

Many of the Grade 3 Oklahoma Academic Standards for Mathematics will require the use of *Eureka Math* content from other grade levels or supplemental materials. A detailed analysis of alignment is provided in the table below. With strategic placement of supplemental materials, *Eureka Math* can ensure students are successful in achieving the proficiencies of the Oklahoma Academic Standards for Mathematics while still benefiting from the coherence and rigor of *Eureka Math*.

INDICATORS

Green indicates that the Oklahoma standard is fully addressed in *Eureka Math*.

Yellow indicates that the Oklahoma standard may not be completely addressed in *Eureka Math*.

Red indicates that the Oklahoma standard is not addressed in *Eureka Math*.

Blue indicates there is a discrepancy between the grade level at which this standard is addressed in the Oklahoma standards and in *Eureka Math*.

Mathematical Actions and Processes	Aligned Components of *Eureka Math*
Develop a Deep and Flexible Conceptual Understanding Demonstrate a deep and flexible conceptual understanding of mathematical concepts, operations, and relations while making mathematical and real-world connections. Students will develop an understanding of how and when to apply and use the mathematics they know to solve problems.	Lessons in every module engage students in making sense of problems and persevering in solving them as required by this standard. This Mathematical Action and Process is analogous to the CCSSM Standards for Mathematical Practice 1 and 2, which are specifically addressed in the following modules: G3 M1: Properties of Multiplication and Division and Solving Problems with Units of 2–5 and 10 G3 M2: Place Value and Problem Solving with Units of Measure G3 M3: Multiplication and Division with Units of 0, 1, 6–9, and Multiples of 10 G3 M4: Multiplication and Area G3 M5: Fractions as Numbers on the Number Line G3 M6: Collecting and Displaying Data G3 M7: Geometry and Measurement Word Problems

Mathematical Actions and Processes	Aligned Components of *Eureka Math*
Develop Accurate and Appropriate Procedural Fluency Learn efficient procedures and algorithms for computations and repeated processes based on a strong sense of numbers. Develop fluency in addition, subtraction, multiplication, and division of numbers and expressions. Students will generate a sophisticated understanding of the development and application of algorithms and procedures.	Lessons in every module engage students in reasoning abstractly and quantitatively as required by this standard. This Mathematical Action and Process is analogous to the CCSSM Standards for Mathematical Practice 7 and 8, which are specifically addressed in the following modules: G3 M1: Properties of Multiplication and Division and Solving Problems with Units of 2–5 and 10 G3 M2: Place Value and Problem Solving with Units of Measure G3 M3: Multiplication and Division with Units of 0, 1, 6–9, and Multiples of 10 G3 M4: Multiplication and Area G3 M5: Fractions as Numbers on the Number Line G3 M6: Collecting and Displaying Data

Mathematical Actions and Processes	Aligned Components of *Eureka Math*
Develop Strategies for Problem Solving Analyze the parts of complex mathematical tasks and identify entry points to begin the search for a solution. Students will select from a variety of problem solving strategies and use corresponding multiple representations (verbal, physical, symbolic, pictorial, graphical, tabular) when appropriate. They will pursue solutions to various tasks from real-world situations and applications that are often interdisciplinary in nature. They will find methods to verify their answers in context and will always question the reasonableness of solutions.	Lessons in every module engage students in constructing viable arguments and critiquing the reasoning of others as required by this standard. This Mathematical Action and Process is analogous to the CCSSM Standards for Mathematical Practice 1, 2, and 8, which are specifically addressed in the following modules: G3 M1: Properties of Multiplication and Division and Solving Problems with Units of 2–5 and 10 G3 M2: Place Value and Problem Solving with Units of Measure G3 M3: Multiplication and Division with Units of 0, 1, 6–9, and Multiples of 10 G3 M4: Multiplication and Area G3 M5: Fractions as Numbers on the Number Line G3 M6: Collecting and Displaying Data G3 M7: Geometry and Measurement Word Problems

Mathematical Actions and Processes	Aligned Components of *Eureka Math*
Develop Mathematical Reasoning Explore and communicate a variety of reasoning strategies to think through problems. Students will apply their logic to critique the thinking and strategies of others to develop and evaluate mathematical arguments, including making arguments and counterarguments and making connections to other contexts.	Lessons in every module engage students in modeling with mathematics as required by this standard. This Mathematical Action and Process is analogous to the CCSSM Standards for Mathematical Practice 3, which is specifically addressed in the following modules: G3 M1: Properties of Multiplication and Division and Solving Problems with Units of 2–5 and 10 G3 M3: Multiplication and Division with Units of 0, 1, 6–9, and Multiples of 10 G3 M4: Multiplication and Area G3 M5: Fractions as Numbers on the Number Line G3 M7: Geometry and Measurement Word Problems

Mathematical Actions and Processes	Aligned Components of *Eureka Math*
Develop a Productive Mathematical Disposition Hold the belief that mathematics is sensible, useful, and worthwhile. Students will develop the habit of looking for and making use of patterns and mathematical structures. They will persevere and become resilient, effective problem solvers.	Lessons in every module engage students in using appropriate tools strategically as required by this standard. This Mathematical Action and Process is analogous to the CCSSM Standards for Mathematical Practice 1, 7, and 8, which are specifically addressed in the following modules: G3 M1: Properties of Multiplication and Division and Solving Problems with Units of 2–5 and 10 G3 M2: Place Value and Problem Solving with Units of Measure G3 M3: Multiplication and Division with Units of 0, 1, 6–9, and Multiples of 10 G3 M4: Multiplication and Area G3 M5: Fractions as Numbers on the Number Line G3 M6: Collecting and Displaying Data G3 M7: Geometry and Measurement Word Problems

Mathematical Actions and Processes	Aligned Components of *Eureka Math*
Develop the Ability to Make Conjectures, Model, and Generalize Make predictions and conjectures and draw conclusions throughout the problem solving process based on patterns and the repeated structures in mathematics. Students will create, identify, and extend patterns as a strategy for solving and making sense of problems.	Lessons in every module engage students in attending to precision as required by this standard. This Mathematical Action and Process is analogous to the CCSSM Standards for Mathematical Practice 4, 7, and 8, which are specifically addressed in the following modules: G3 M1: Properties of Multiplication and Division and Solving Problems with Units of 2–5 and 10 G3 M2: Place Value and Problem Solving with Units of Measure G3 M3: Multiplication and Division with Units of 0, 1, 6–9, and Multiples of 10 G3 M4: Multiplication and Area G3 M5: Fractions as Numbers on the Number Line G3 M6: Collecting and Displaying Data

Mathematical Actions and Processes	Aligned Components of *Eureka Math*
Develop the Ability to Communicate Mathematically Students will discuss, write, read, interpret and translate ideas and concepts mathematically. As they progress, students' ability to communicate mathematically will include their increased use of mathematical language and terms and analysis of mathematical definitions.	Lessons in every module engage students in looking for and making use of structure as required by this standard. This Mathematical Action and Process is analogous to the CCSSM Standards for Mathematical Practice 3 and 6, which are specifically addressed in the following modules: G3 M1: Properties of Multiplication and Division and Solving Problems with Units of 2–5 and 10 G3 M2: Place Value and Problem Solving with Units of Measure G3 M3: Multiplication and Division with Units of 0, 1, 6–9, and Multiples of 10 G3 M4: Multiplication and Area G3 M5: Fractions as Numbers on the Number Line G3 M6: Collecting and Displaying Data G3 M7: Geometry and Measurement Word Problems

Strand	Objectives for Mathematical Content	Aligned Components of *Eureka Math*
Number & Operations	**Standard: Compare and represent whole numbers up to 100,000 with an emphasis on place value and equality.**	
	3.N.1.1 Read, write, discuss, and represent whole numbers up to 100,000. Representations may include numerals, expressions with operations, words, pictures, number lines, and manipulatives.	G4 M1: Place Value, Rounding, and Algorithms for Addition and Subtraction
	3.N.1.2 Use place value to describe whole numbers between 1,000 and 100,000 in terms of ten thousands, thousands, hundreds, tens and ones, including expanded form.	G4 M1: Place Value, Rounding, and Algorithms for Addition and Subtraction
	3.N.1.3 Find 10,000 more or 10,000 less than a given five-digit number. Find 1,000 more or 1,000 less than a given four- or five-digit number. Find 100 more or 100 less than a given four- or five-digit number.	G4 M1 Lesson 6: Find 1, 10, and 100 thousand more and less than a given number. Note: Supplemental material is necessary to incorporate practice with finding 100 more or 100 less than a given five-digit number.
	3.N.1.4 Use place value to compare and order whole numbers up to 100,000, using comparative language, numbers, and symbols.	G4 M1 Lesson 5: Compare numbers based on meanings of the digits using >, <, or = to record the comparison.

Strand	Objectives for Mathematical Content	Aligned Components of *Eureka Math*
	Standard: Add and subtract multi-digit whole numbers; multiply with factors up to 10; represent multiplication and division in various ways; Solve real-world and mathematical problems through the representation of related operations.	
	3.N.2.1 Represent multiplication facts by using a variety of approaches, such as repeated addition, equal-sized groups, arrays, area models, equal jumps on a number line and skip counting.	G3 M1: Properties of Multiplication and Division and Solving Problems with Units of 2–5 and 10 G3 M3 Topic A: Properties of Multiplication and Division G3 M3 Topic E: Analysis of Patterns and Problem Solving Including Units of 0 and 1 G3 M4: Multiplication and Area G3 M7 Lessons 20–21: Construct rectangles with a given perimeter using unit squares and determine their areas. G3 M7 Topic E: Problem Solving with Perimeter and Area
	3.N.2.2 Demonstrate fluency of multiplication facts with factors up to 10.	G3 M1 Topic E: Multiplication and Division Using Units of 4 G3 M3: Multiplication and Division with Units of 0, 1, 6–9, and Multiples of 10

Strand	Objectives for Mathematical Content		Aligned Components of *Eureka Math*
	3.N.2.3 Use strategies and algorithms based on knowledge of place value and equality to fluently add and subtract multi-digit numbers.		G3 M2 Lesson 4: Solve word problems involving time intervals within 1 hour by counting backward and forward using the number line and clock. G3 M2 Lesson 5: Solve word problems involving time intervals within 1 hour by adding and subtracting on the number line. G3 M2 Lesson 8: Solve one-step word problems involving metric weights within 100 and estimate to reason about solutions. G3 M2 Lesson 11: Solve mixed word problems involving all four operations with grams, kilograms, liters, and milliliters given in the same units. G3 M2 Topic D: Two- and Three-Digit Measurement Addition Using the Standard Algorithm G3 M2 Topic E: Two- and Three-Digit Measurement Subtraction Using the Standard Algorithm
	3.N.2.4 Recognize when to round numbers and apply understanding to round numbers to the nearest ten thousand, thousand, hundred, and ten and use compatible numbers to estimate sums and differences.		G3 M2 Topic C: Rounding to the Nearest Ten and Hundred G4 M1: Place Value, Rounding, and Algorithms for Addition and Subtraction

Strand	Objectives for Mathematical Content	Aligned Components of *Eureka Math*
	3.N.2.5 Use addition and subtraction to solve real-world and mathematical problems involving whole numbers. Use various strategies, including the relationship between addition and subtraction, the use of technology, and the context of the problem to assess the reasonableness of results.	G3 M2 Lesson 4: Solve word problems involving time intervals within 1 hour by counting backward and forward using the number line and clock. G3 M2 Lesson 5: Solve word problems involving time intervals within 1 hour by adding and subtracting on the number line. G3 M2 Lesson 8: Solve one-step word problems involving metric weights within 100 and estimate to reason about solutions. G3 M2 Lesson 11: Solve mixed word problems involving all four operations with grams, kilograms, liters, and milliliters given in the same units. G3 M2 Topic D: Two- and Three-Digit Measurement Addition Using the Standard Algorithm G3 M2 Topic E: Two- and Three-Digit Measurement Subtraction Using the Standard Algorithm G3 M3 Lesson 18: Solve two-step word problems involving all four operations and assess the reasonableness of solutions. G3 M7 Topic A: Solving Word Problems Note: Supplemental material is necessary to incorporate the use of technology.

Strand	Objectives for Mathematical Content	Aligned Components of *Eureka Math*
	3.N.2.6 Represent division facts by using a variety of approaches, such as repeated subtraction, equal sharing and forming equal groups.	G3 M1: Properties of Multiplication and Division and Solving Problems with Units of 2–5 and 10 G3 M3: Multiplication and Division with Units of 0, 1, 6–9, and Multiples of 10
	3.N.2.7 Recognize the relationship between multiplication and division to represent and solve real-world problems.	G3 M1: Properties of Multiplication and Division and Solving Problems with Units of 2–5 and 10 G3 M3: Multiplication and Division with Units of 0, 1, 6–9, and Multiples of 10
	3.N.2.8 Use strategies and algorithms based on knowledge of place value, equality and properties of addition and multiplication to multiply a two-digit number by a one-digit number.	G3 M3 Topic F: Multiplication of Single-Digit Factors and Multiples of 10 G4 M3 Topic C: Multiplication of up to Four Digits by Single-Digit Numbers
	Standard: Understand meanings and uses of fractions in real-world and mathematical situations.	
	3.N.3.1 Read and write fractions with words and symbols.	G3 M5 Lesson 9: Build and write fractions greater than one whole using unit fractions. G3 M5 Topic D: Fractions on the Number Line
	3.N.3.2 Construct fractions using length, set, and area models.	G3 M5: Fractions as Numbers on the Number Line G5 M4 Topic C: Multiplication of a Whole Number by a Fraction

Strand	Objectives for Mathematical Content	Aligned Components of *Eureka Math*
	3.N.3.3 Recognize unit fractions and use them to compose and decompose fractions related to the same whole. Use the numerator to describe the number of parts and the denominator to describe the number of partitions.	G3 M5 Topic B: Unit Fractions and Their Relation to the Whole G3 M5 Lesson 12: Specify the corresponding whole when presented with one equal part.
	3.N.3.4 Use models and number lines to order and compare fractions that are related to the same whole.	G3 M5 Topic C: Comparing Unit Fractions and Specifying the Whole G3 M5 Lesson 18: Compare fractions and whole numbers on the number line by reasoning about their distance from 0. G3 M5 Lesson 19: Understand distance and position on the number line as strategies for comparing fractions. G3 M5 Topic F: Comparison, Order, and Size of Fractions
	Standard: Determine the value of a set of coins or bills.	
	3.N.4.1 Use addition to determine the value of a collection of coins up to one dollar using the cent symbol and a collection of bills up to twenty dollars.	G2 M7 Topic B: Problem Solving with Coins and Bills
	3.N.4.2 Select the fewest number of coins for a given amount of money up to one dollar.	G2 M7 Topic B: Problem Solving with Coins and Bills

Strand	Objectives for Mathematical Content	Aligned Components of *Eureka Math*
Algebraic Reasoning & Algebra	**Standard: Describe and create representations of numerical and geometric patterns.**	
	3.A.1.1 Create, describe, and extend patterns involving addition, subtraction, or multiplication to solve problems in a variety of contexts.	G3 M3: Multiplication and Division with Units of 0, 1, 6–9, and Multiples of 10
	3.A.1.2 Describe the rule (single operation) for a pattern from an input/output table or function machine involving addition, subtraction, or multiplication.	G3 M3 Lesson 1: Study commutativity to find known facts of 6, 7, 8, and 9. G3 M6: Collecting and Displaying Data G4 M2: Unit Conversions and Problem Solving with Metric Measurement G4 M7 Topic A: Measurement Conversion Tables
	3.A.1.3 Explore and develop visual representations of growing geometric patterns and construct the next steps.	G3 M7 Lesson 11: Tessellate to understand perimeter as the boundary of a shape. Note: Supplemental material is necessary to fully address this standard.

Strand	Objectives for Mathematical Content		Aligned Components of *Eureka Math*
	Standard: Use number sentences involving multiplication and unknowns to represent and solve real-world and mathematical problems.		
	3.A.2.1 Find unknowns represented by symbols in arithmetic problems by solving one-step open sentences (equations) and other problems involving addition, subtraction, and multiplication. Generate real-world situations to represent number sentences.		G3 M3 Lesson 11: Interpret the unknown in multiplication and division to model and solve problems. G3 M3 Lesson 15: Interpret the unknown in multiplication and division to model and solve problems. G3 M3 Lesson 18: Solve two-step word problems involving all four operations and assess the reasonableness of solutions. G3 M3 Lesson 21: Solve two-step word problems involving multiplying single-digit factors and multiples of 10. G3 M7 Topic A: Solving Word Problems
	3.A.2.2 Recognize, represent and apply the number properties (commutative, identity, and associative properties of addition and multiplication) using models and manipulatives to solve problems.		G3 M1: Properties of Multiplication and Division and Solving Problems with Units of 2–5 and 10 G3 M3: Multiplication and Division with Units of 0, 1, 6–9, and Multiples of 10

Strand	Objectives for Mathematical Content	Aligned Components of *Eureka Math*
Geometry & Measurement	**Standard: Use geometric attributes to describe and create shapes in various contexts.**	
	3.GM.1.1 Sort three-dimensional shapes based on attributes.	GK M2 Topic B: Three-Dimensional Solid Shapes G1 M5 Lesson 3: Find and name three-dimensional shapes including cone and rectangular prism, based on defining attributes of faces and points.
	3.GM.1.2 Build a three-dimensional figure using unit cubes when picture/shape is shown.	G5 M5 Topic A: Concepts of Volume
	3.GM.1.3 Classify angles as acute, right, obtuse, and straight.	G4 M4: Angle Measure and Plane Figures
	Standard: Understand measurable attributes of real-world and mathematical objects using various tools.	
	3.GM.2.1 Find perimeter of polygon, given whole number lengths of the sides, in real-world and mathematical situations.	G3 M7: Geometry and Measurement Word Problems
	3.GM.2.2 Develop and use formulas to determine the area of rectangles. Justify why length and width are multiplied to find the area of a rectangle by breaking the rectangle into one unit by one unit squares and viewing these as grouped into rows and columns.	G3 M4: Multiplication and Area

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	3.GM.2.3 Choose an appropriate measurement instrument and measure the length of objects to the nearest whole centimeter or meter.		G2 M2 Topic A: Understand Concepts About the Ruler G2 M2 Lesson 4: Measure various objects using centimeter rulers and meter sticks. G2 M2 Lesson 6: Measure and compare lengths using centimeters and meters.
	3.GM.2.4 Choose an appropriate measurement instrument and measure the length of objects to the nearest whole yard, whole foot, or half inch.		G2 M7 Topic C: Creating an Inch Ruler G2 M7 Topic D: Measuring and Estimating Length Using Customary and Metric Units G3 M6 Lesson 5: Create ruler with 1-inch, 1/2-inch, and 1/4-inch intervals, and generate measurement data.
	3.GM.2.5 Using common benchmarks, estimate the lengths (customary and metric) of a variety of objects.		G3 M2 Lesson 7: Develop estimation strategies by reasoning about the weight in kilograms of a series of familiar objects to establish mental benchmark measures. G3 M2 Lesson 10: Estimate and measure liquid volume in liters and milliliters using the vertical number line. G3 M6 Lesson 5: Create ruler with 1-inch, 1/2-inch, and 1/4-inch intervals, and generate measurement data.
	3.GM.2.6 Use an analog thermometer to determine temperature to the nearest degree in Fahrenheit and Celsius.		G6 M3 Lessons 2–3: Real-World Positive and Negative Numbers and Zero Note: Supplemental material is necessary to fully address this standard.

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	3.GM.2.7 Count cubes systematically to identify number of cubes needed to pack the whole or half of a three-dimensional structure.	G5 M5 Topic A: Concepts of Volume
	3.GM.2.8 Find the area of two-dimensional figures by counting total number of same size unit squares that fill the shape without gaps or overlaps.	G3 M4 Topic A: Foundations for Understanding Area G3 M4 Lesson 6: Draw rows and columns to determine the area of a rectangle given an incomplete array.
	Standard: Solve problems by telling time to the nearest 5 minutes.	
	3.GM.3.1 Read and write time to the nearest 5-minute (analog and digital).	G3 M2 Topic A: Time Measurement and Problem Solving G3 M2 Lesson 12: Round two-digit measurements to the nearest ten on the vertical number line.
	3.GM.3.2 Determine the solutions to problems involving addition and subtraction of time in intervals of 5 minutes, up to one hour, using pictorial models, number line diagrams, or other tools.	G3 M2 Topic A: Time Measurement and Problem Solving G3 M2 Lesson 12: Round two-digit measurements to the nearest ten on the vertical number line.

Strand	Objectives for Mathematical Content	Aligned Components of *Eureka Math*
Data & Probability	**Standard: Summarize, construct, and analyze data.**	
	3.D.1.1 Summarize and construct a data set with multiple categories using a frequency table, line plot, pictograph, and/or bar graph with scaled intervals.	G3 M6: Collecting and Displaying Data
	3.D.1.2 Solve one- and two-step problems using categorical data represented with a frequency table, pictograph, or bar graph with scaled intervals.	G3 M6: Collecting and Displaying Data